Coastal Impact Assistance Program (CIAP) Project Nomination

Project Title: "Beneficial Use of Dredge Material from the Dredging of the Calcasieu Ship Channel to Restore and/or Create Intertidal Marsh"

Date Submitted: April 19, 2006

ENTITY/INDIVIDUAL NOMINATING THE PROJECT:
Lake Charles Harbor & Terminal District

POINT OF CONTACT (Address/Phone/Fax/E-Mail):
Adam McBride or Mike Dees
150 Marine Street
Post Office Box 3753
Lake Charles, Louisiana 70602
(337)493-3622/ Fax (337) 493-3502
E-Mail: pcharles@portlc.com

TOTAL CIAP FUNDS REQUESTED:
The Lake Charles Harbor & Terminal District respectfully requesting $4.7 million to design-build one of the three sites listed in the Project Description section.

INFRASTRUCTURE FUNDS PROSED:
No known infrastructure funds are proposed for use.

PROJECT DESCRIPTION AND LOCATION OF PROJECT(map attached):
The proposed ecosystem restoration project will restore up to 350 acres of coastal wetlands that have been lost as a result of subsidence. Material will be placed in an area and manner which will result in new intertidal marsh being created. Initiating one or more of the recommended projects would allow for the dredged materials to be beneficially used for ecosystem restoration and protection, providing essential habitat for fish and wildlife as well protecting the existing coastal wetlands. The area to be restored is located within the parishes of Calcasieu and Cameron, and along the shores of Calcasieu Lake within the parishes of Calcasieu and Cameron. Three prospective ecosystem restoration sites – one in the Sabine National Wildlife Refuge and two on

private lands -- have been identified near or adjacent to the Calcasieu Ship Channel. The Calcasieu Ship Channel provides marine vessel access from the Gulf of Mexico to Lake Charles, directly supporting the oil and gas industry. Currently, dredged materials from the Ship Channel are placed in upland disposal areas. The proposed project would help restore authorized width and depth in the Calcasieu Ship Channel along a critical reach of the waterway. The potential sites (see Figures 1- 4) depicted on the attached figures are within reasonable proximity to recently awarded dredging contracts, and the sediment to be dredged would be available for placement at either of these locations. The maintenance dredging cycle is approximately every three years with the last cycle occurring in 2004 and the next cycle expected to occur in 2007. The site to be restored will be selected based upon Resource agency recommendations and the cost effectiveness of the restoration. The proposed locations are:

Sabine National Wildlife Refuge

Site "H" Ecosystem Restoration Site - Habitat restoration and bank protection project located in Southwest Calcasieu Lake, just west of the Calcasieu Ship Channel, adjacent to an existing dredged material placement area and at the eroding shoreline of the Sabine National Wildlife Refuge. This project would restore approximately 220 acres of eroded shoreline and marsh at an estimated cost of $4.7 million. The proposed site will utilize on site material to create an earthen dike structure as a barrier to contain beneficial dredged material for a marsh platform. Once the material has consolidated to marsh grade, dikes will be breeched to enhance circulation and the marsh platform will be channelized, ponded and planted with native marsh grasses.

Secondary Private Ownership Sites

1. *Black Lake Ecosystem Restoration* - Marsh building in the Black Lake area (Dr. Hinton property) just south and adjacent to the Gulf Intracoastal Waterway, restoring approximately 220 acres of subsided marsh at an estimated cost of $4.7 million. This site is protected by natural boundaries and is similar in construction to the Site "H" project. This project will provide additional barrier protection during storm events to the Gulf Intracoastal Water Way, (GIWW). The sitting of this site is such that it will utilize the newly created marsh as a protection barrier filling a narrowing strip of land, preventing a possible breech to the GIWW.

2. *Geer/Tolbert Ecosystem Restoration Site* - Marsh restoration and property reclamation on coastal zone property of cooperative local land owners on approximately 140 acres of near shore and intertidal marsh for an estimated project cost of $4.7 million. The project is located in Cameron Parish on the upper east shoreline of Calcasieu Lake. The project would entail the construction of 2,000 feet of geotubes and approximately 4,000 feet of earthen berms for the creation of a placement site for shoreline restoration and intertidal marsh. On site material will be used to create the earthen berm along with the filling of the geotube shoreline protection. Material from the channel will be utilized for marsh creation.

PROJECT TYPE:

Conservation, Restoration and Protection of Coastal Area, Including Wetland

PROJECT JUSTIFICATION:

Regional subsidence has caused approximately 30,000 acres of marsh to be lost in the Calcasieu Lake area. The bay bottom substrate has dropped such that water column heights no longer support marsh plant species. Prior to the loss of marsh habitat, wave energy was attenuated by marsh vegetation, thus protecting nearby shorelines from erosion. Although subsidence rates have decreased to near background rates, exposed shorelines continue to experience accelerated erosion. Beneficial Use of the dredged materials from the Calcasieu Ship Channel for one or more of the recommended projects would protect exposed shorelines and restore impacted nearshore and intertidal wetlands.

Lake Charles Harbor & Terminal District, USACE, LDNR, USFWS, LDWF and others have identified numerous reclamation projects in connection with preliminary efforts to generate a 20-year Dredged Material Management Plan for the Calcasieu River Waterway. For the selected project in this application, cost projections include engineering and reasonable project administration costs and dredged material pumping costs beyond that currently allowed by the U.S. Army Corps of Engineers for maintenance and operation of the Ship Channel. Thus, the PROJECT allows the dredged materials to be used beneficially for wetland restoration and protection rather than disposed of at an upland site.

Investigations for each project proposal site have been completed. The Lake Charles Harbor and Terminal District has estimated construction costs ranging from approximately $20,000 to $30,000 per acre. The exact acreage and cost will be determined by the selected projects final design. The potential exists for the sites to be expanded to more than 350 acres as part of ongoing projects within the sites respective areas or as part of the long term dredge material management plan being developed by the Lake Charles Harbor and Terminal District and USACE, New Orleans District.

EVALUATION CRITERIA:

1. *Is the proposed project free of issues that may impact timely implementation of the project features?*

   Project implementation would coincide with maintenance dredging of the Calcasieu Ship Channel that occurs every 3 years, which is well within the CIAP implementation time frame.

2. *Is the proposed project linked to a regional strategy for maintaining established landscape features critical to a sustainable ecosystem structure and function?*

   The proposed projects are linked to the development of a regional 20-year dredged disposal management plan that would support the restoration and protection of established and lost landscape features such as nearshore and intertidal marshes along Calcasieu Lake with additional funding beyond what is currently allowed by the U.S. Army Corps of Engineers for maintenance and operation of the Ship Channel.

3. *Does the proposed project protect health and safety or infrastructure of national, state, regional or local significance?*

   Each proposed site provides various levels of protection, from protection and restoration for the East Calcasieu Lake shoreline to providing marsh creation/restoration for a narrowing section of land adjacent to the GIWW. Marsh habitat serves as a natural buffer feature against wave attack and storm surge by attenuation these erosive processes and providing a protection barrier for the local communities, infrastructure, and adjacent shorelines. The project focuses on restoring and protecting these critical marine habitats through the beneficial use of dredge material.

4. *How cost effective is the proposed project?*

   The proposed project is the most cost effective way to reverse the pattern of subsidence and loss of vital coastal wetlands due to the destructive process of storm passage. The restoration of intertidal marsh can aid in wave attenuation and provide erosion protection against these processes that have adversely affected this area.

5. *What is the certainty of benefits resulting from implementation of the proposed project?*

   The proposed project will reduce erosion, increase water quality, provide much needed shoreline protection, and provide essential fish and wildlife habitat in the area. Creation of intertidal marsh will reclaim wetland areas lost to subsidence and erosion storm processes.

   Throughout the Calcasieu and Sabine basin, marsh creation projects have proven successful and certainty of reaching the target elevation for marsh sustainability has been demonstrated. The history of using beneficial dredging material for wetland creation has been established all along the Gulf Coast and within various bays and basins from Texas to Florida.

6. *Does the proposed project address an area of critical conservation/restoration need or a high land loss area?*

   Regional subsidence has caused approximately 30,000 acres of marsh to be lost in the Calcasieu Lake area. The bay bottom substrate has dropped such that water column heights no longer support marsh plant species. Prior to the loss of marsh habitat, wave energy was attenuated by marsh vegetation, thus protecting nearby shorelines from erosion. Although subsidence rates have decreased to near background rates, exposed shorelines continue to experience accelerated erosion.

7. *How sustainable are the benefits of the proposed project?*

   The project is sustained with a variety of shore protection strategies and periodic renourishment of dredged materials over the maintenance life of the Ship Channel.

Project Cost Share:
No project cost share partner has been identified to date.

8,000' 0

Scale : 1" = 8,000'

N

EXHIBIT 1

AREA MAP
CALCASIEU LAKE

GBA
10631 S. Sam Houston Parkway West
Suite 190
Houston, Texas 77071
Phone (832) 518-2112

1,000' 0

Scale : 1" = 1,000'

N

EXHIBIT 2

GEER / TOLBERT PROPERTIES
CALCASIEU LAKE

GBA
10631 S. Sam Houston Parkway West
Suite 190
Houston, Texas 77071
Phone (832) 518-2112

1,000' 0

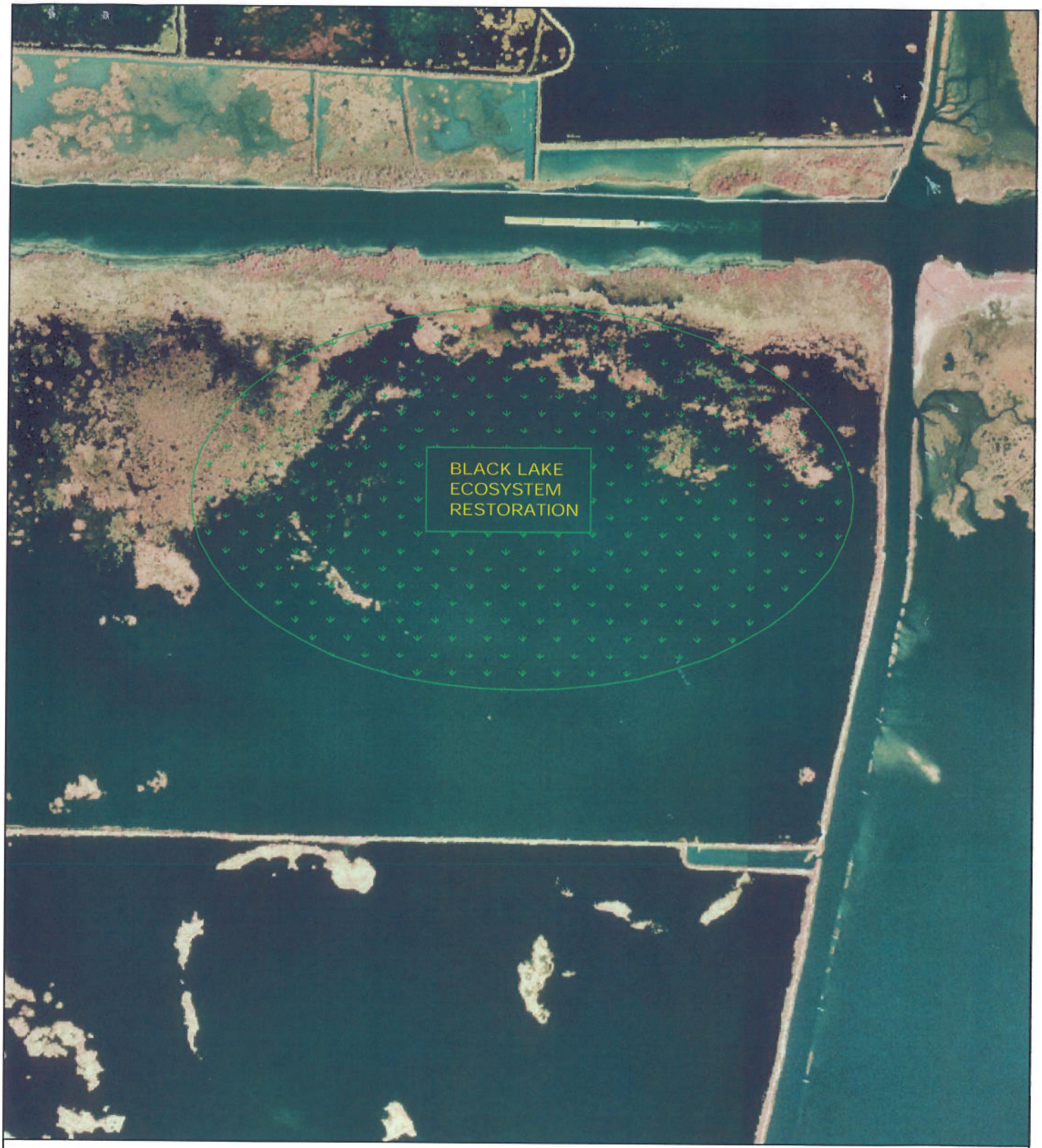
Scale : 1" = 1,000'

N

EXHIBIT 3

SITE "H" AREA
CALCASIEU LAKE

GBA
10631 S. Sam Houston Parkway West
Suite 190
Houston, Texas 77071
Phone (832) 518-2112



1,000' 0

Scale : 1" = 1,000'

N

EXHIBIT 4

BLACK LAKE AREA
CALCASIEU LAKE

GBA
10631 S. Sam Houston Parkway West
Suite 190
Houston, Texas 77071
Phone (832) 518-2112